



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

560093

SERIAL NUMBER	07/30/90	FILING DATE	MORRISON	FIRST NAMED INVENTOR	G	ATTORNEY DOCKET NO.
---------------	----------	-------------	----------	----------------------	---	---------------------

GARY A. WALPERT
HALE & DORR
60 STATE STREET
BOSTON, MA 02109

CHAN, E

EXAMINER

ART UNIT	PAPER NUMBER
----------	--------------

01/14/92

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined. ☒ Responsive to communication filed on 10/9/91 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 2 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892. 2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449. 4. ☐ Notice of Informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474. 6. ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 71, 72, 74-83 are pending in the application.
Of the above, claims are withdrawn from consideration.
2. ☐ Claims have been cancelled.
3. ☐ Claims are allowed.
4. ☒ Claims 71, 72, 74-83 are rejected.
5. ☐ Claims are objected to.
6. ☐ Claims are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☒ The corrected or substitute drawings have been received on Under 37 C.F.R. 1.84 these drawings are ☒ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☒ The proposed additional or substitute sheet(s) of drawings, filed on has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed has been ☐ approved; ☐ disapproved (see explanation).
12. ☒ Acknowledgement is made of the claim for priority under U.S.C. 119: The certified copy has ☐ been received. ☐ not been received
☐ been filed in parent application, serial no. filed on
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Art Unit 237

1. Applicant as per their remark indicated that they have provided drawings wherein the changes have been shown in red. However, the examiner fails to find the differences between the original drawings and the proposed drawing changes. For example, the original Fig. 6 have been shown to contain the words "FILE", "FILE 2", "FILE 1", and "FILE 0" which applicants have circled in red in the proposed drawing change. In other words, it is still unclear as to the changes in the drawings.

2. Applicants are requested to provide PTO with a copy of PTO-1449 showing the prior art cited in the grandparent application.

3. Claims 71, 72, 74-83 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 71, 72, 74-77 are rejected for failing to particularly point out and distinctly claim the structure which goes to make up the device.

Claim 74, line 13 "no later than during the same time" is unclear in meaning. The above comment also applies to claims 75, 78, 80, 81, 82 and 83.

As per claims 78-83, it fail to particularly point out and distinctly claim the invention because there is no specific statement in the preamble and in the body of the claim that

Art Unit 237

indicate that a machine method is being claimed and not just some general method which could be interpreted as a person's organizational process i.e., mental process augmented by pencil and paper markings.

As per claim 79, the body of the claim fails to explicitly recite any operations on the non-branch instructions and branch instruction. In other words, the body fails to recite any method for executing the Branch Instruction.

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 71, 72, 74-83 are rejected under 35 U.S.C. § 103 as being unpatentable over McDowell references in view of Freiman et al (3,343,135).

The reasons have been presented in the previous Office action and will not be repeated. Applicants as per page 13 of

Art Unit 237

their remark pointed out that the claimed invention differs from the references in that McDowell reference fails to teach or suggest early processing of a branch instruction so that it executes beginning at a time earlier than the last non-branch instruction of a block of instruction. The examiner disagrees. McDowell as per his article "A Simple Architecture For Low Level Parallelism", pages 472-477, 1983 IEEE, provides teaching or suggestion for early processing of a branch instruction. See, for example, the last paragraph on page 474 and the top of page 475 wherein it teaches that all MOPs (instructions) with a single PI (single entry single exit basic block) are executed in parallel. The top of page 475 also indicated that the last MOP of each PI may be a branch operation. Thus McDowell clearly suggesting the execution of the last branch operation of the PI in parallel with other non-branch instructions. McDowell as per the last paragraph of page 475 also suggesting the scheduling of tasks such that the tasks are to be completed in the shortest number of time units. These teachings clearly suggesting the early processing of branch instruction whenever possible in order to complete the tasks in the shortest number of time units.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS

Serial Number 560,093

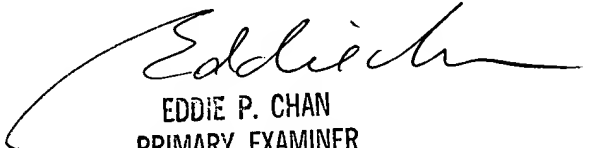
-5-

Art Unit 237

ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Chan whose telephone number is (703) 308-0776.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0754.


EDDIE P. CHAN
PRIMARY EXAMINER
ART UNIT 237

E. Chan/mb
December 31, 1991